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FIRST RECORDS OF THE RARELY COLLECTED BUG *NANNOCORIS ARENARIUS* FROM GEORGIA, NORTH CAROLINA, AND VIRGINIA (HETEROPTERA: SCHIZOPTERIDAE) -- On the basis of their paucity in collections, members of the family Schizopteridae may be considered among the rarest North American insects, with the majority of species known from fewer than twenty specimens. Only four species of this predominantly tropical and subtropical family have been recorded from the region north of Mexico (Henry, 1988). However, whether they are truly rare, or only rarely collected owing to their small size (typically <2 mm) or cryptic habits, remains to be determined. This family was unknown in Virginia until the recent reports of *Glyptocombus saltator* Heidemann by Roble & Hoffman (2000) and *Corixidea major* McAtee & Malloch by Hoffman et al. (2005). Herein, we add a third member of this family, *Nannocoris arenarius* Blatchley, to the Virginia fauna. The only other known North American member of this family, *Schizoptera bispina* McAtee & Malloch, has been reported from Florida, Mexico, and Guatemala (Henry, 1988), but it seems unlikely that this apparently more tropical species will be found as far north as Virginia in the future.

Nannocoris arenarius was described by Blatchley (1926) from Dunedin, Pinellas County, Florida. More than a half century later, both Slater & Baranowski (1978) and Henry (1988) reported that the species was still known only from Florida. Overlooked, however, was an obscure literature record for western South Carolina (DuRant & Fox, 1966). Below, we provide new or previously unpublished records of *N. arenarius* from Georgia, North Carolina, and Virginia. To facilitate recognition of this species, we provide a brief diagnosis and dorsal habitus drawing (Fig. 1) made (by RLH) from one of the Virginia specimens.

New records:

GEORGIA: Bryan Co.: no specific locality, 17 September 1974, R. Beshear, 1♀, "Berlese funnel on *Panicum*" (National Museum of Natural History [USNM]).

NORTH CAROLINA: Mecklenburg Co.: Davidson College, Davidson, berleseate of dried cattle manure, 11 November 1955, 5♂♂, Tom Daggy (North Carolina State University [NCSU]).

VIRGINIA: City of Suffolk: South Quay pine barrens, "100 m north of the canal" [36° 33.506' N, 76° 54.515'

W], ca. 13 km S of Franklin, pitfall trap, 2 July-6 August 2003, 2♂♂, 1♀; 6 August-13 September 2003, 2♂♂, S. M. Roble (Virginia Museum of Natural History [VMNH]).

These records extend the range of *N. arenarius* about 600 km east-northeast of the nearest previously known locality, Clemson, in western South Carolina. Blatchley (1926) reported collection dates of 4 January to 16 February, and the USNM has two additional specimens that he collected at or near the type locality on 19 March 1927. All of the specimens reported herein were collected later in the year (July to November).

Diagnosis: Color uniformly brown, appendages and broad costal margin of hemelytra clear pale brown. Body length 1.1-1.2 mm, hemelytra strongly coleopteroid, without trace of membrane, veins prominent, costal margin broadly explanate. Head conical, prolonged anteriorly, eyes small, subpedunculate, overlying anterior corners of pronota, ocelli absent; antennae displaced ventrad below level of eyes, nearly in contact with rostral groove. Antennomeres 1 and 2 stout, cylindrical, similar in size and shape, 3 and 4 abruptly more slender, elongated, beset with long slender hairs, basal third of 4 notably broadened (Fig. 2). Rostrum extended back to level of mesocoxae, composed of 3 articles of which the 2nd is by far the longest. Bucculae absent, a shallow median

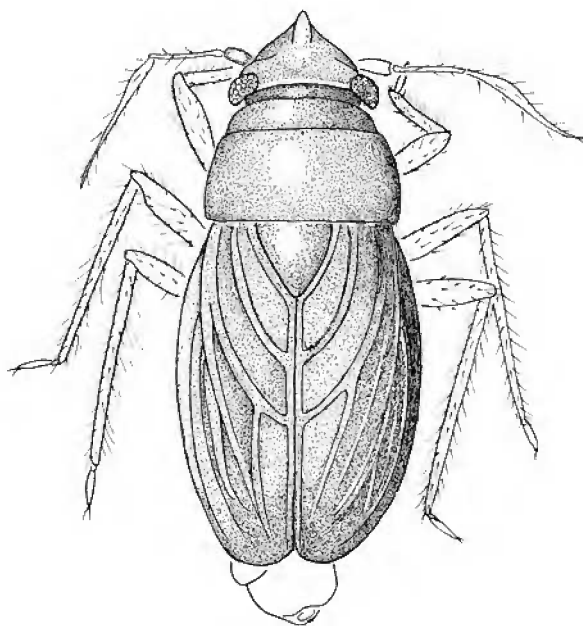


Fig 1. Dorsal aspect of *Nannocoris arenarius* Blatchley specimen from South Quay, Suffolk, Virginia. Details of wing venation cannot be shown precisely owing to the abrupt downward curvature of the hemelytra.

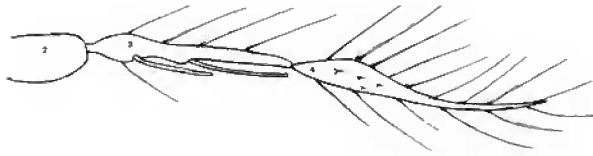


Fig. 2. Antenna of same specimen as in Fig. 1, showing modified setae of 3rd antennomere and broadened basal region of 4th.

rostral groove present. Anterior third of pronotum constricted, resembling a broad deep collar. Ventral sides of prothorax convexly enlarged around coxal articulation. Tarsi with two tarsomeres, the basal only 20% length of distal, latter slender-fusiform; tarsal claws simple, no arolia evident.

DISCUSSION

Until the genitalic structures of specimens from North American localities can be compared with that of the Neotropical type species, reference of our material to *Nannocoris* must remain somewhat provisional. A superficial comparison of the specimens from Davidson, N.C., with those from South Quay shows slight differences in antennal structure (same sex compared).

From the limited information at our disposal, it seems that this species is partial to dry biotopes. The original description (Blatchley, 1926) stated "... sifted from debris in the bases of dense tufts of grass growing on the middle ridge and sides of an otherwise bare sandy roadway through the pinelands." Specimens from Clemson, S.C., were taken in rocky, sandy soil in pine stands (none from hardwood stands; DuRant & Fox, 1966). The series from Davidson, N.C., were noted as being extracted from the material beneath dry "cow patties," and those from South Quay were taken in pitfalls in xeric pine woods. The species was not attracted to UV lights operated nearby on numerous occasions.

Although DuRant & Fox (1966) specified that their insect material was identified by specialists with the Agricultural Service, USDA, no specimens of *Nannocoris* were apparently retained for the USNM collection, nor did Dr. A. G. Wheeler find any in the logical depository at Clemson University. The whereabouts of these specimens remain a mystery.

ACKNOWLEDGEMENTS

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LITERATURE CITED

- Blatchley, W. S. 1926. Heteroptera or True Bugs of Eastern North America, with Especial Reference to the Faunas of Indiana and Florida. Nature Publishing Co., Indianapolis. 1,116 pp.
- DuRant, J. A., & R. C. Fox. 1966. Some arthropods of the forest floor in pine and hardwood forests in the South Carolina Piedmont region. *Annals of the Entomological Society of America* 69: 202-207.
- Henry, T. J. 1988. Family Schizopteridae. Pp. 682-683 *In* T. J. Henry & R. C. Froeschner (eds.), *Catalog of the Heteroptera, or True Bugs, of Canada and the Continental United States*. E. J. Brill, Leiden and New York.
- Hoffman, R. L., S. M. Roble, & T. J. Henry. 2005. The occurrence in Florida and Virginia of *Corixidea major*, an exceptionally rare North American bug (Heteroptera: Schizopteridae). *Banisteria* 26: 18-19.
- Roble, S. M., & R. L. Hoffman. 2000. Three true bugs new to the Virginia fauna, including the first record of the family Schizopteridae (Heteroptera). *Banisteria* 16: 41-45.
- Slater, J. A., & R. M. Baranowski. 1978. *How to Know the True Bugs (Hemiptera-Heteroptera)*. Wm. C. Brown Company Publishers, Dubuque, IA. 256 pp.
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